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I N S E C T P E S T S U R V E Y

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STATUS OF THE SOUTHWESTERN CORN BORER¹ IN NEBRASKA,
KANSAS, AND OKLAHOMA, FALL 1947¹

By H. H. Walkden,
Division of Cereal and Forage Insect Investigations

A survey was conducted in the fall of 1947 to determine the northern and eastern limits of distribution of the southwestern corn borer (Iattraea grandiosella Dyar) in Nebraska, Kansas, and Oklahoma, and the intensity of infestation in the older infested portions of those states. In each county surveyed 100 stalks in each of one to six fields were examined. In those counties along the lightly infested eastern and northern borders of infestation, 100 stalks in each field were examined, and if no infestation was found, then a circuit roughly 300 feet wide was made through the field to look for lodged stalks. Any lodged stalks thus seen were examined for girdling by the borer.

Extent of Infestation Northward and Eastward

No infestation was found in four Nebraska Counties (Muckolls, Webster, Franklin, and Harlan) contiguous with the northernmost infested counties in Kansas. The eastern line of infestation in both Oklahoma and Kansas was found to be practically the same as in 1946, with the exception that in southeastern Oklahoma infestation was found in a line of counties about one county east of the line determined last year. In Kansas no infestation was found in the fall of 1947 in certain of the counties along the eastern border of infestation where borers were found last year. The extent of the infested area eastward in Kansas and Oklahoma and the percentage of stalks infested in the fields examined, as shown by the 1947 survey, are indicated in figure 1. The extent and intensity of infestation westward were not determined, and counties that show no figures on the map were not surveyed.

1/ The information presented in this report was obtained by the Bureau of Entomology and Plant Quarantine in cooperation with the Agricultural Experiment Stations of Nebraska, Kansas, and Oklahoma.

Surveys in 1946 and 1947 indicated the presence of both the southwestern corn borer and the European corn borer in Osage and Coffee Counties, Kansas.

Abundance

Of the areas surveyed the most heavily infested were the sandy soil sections of Barton, Edwards, Stafford, Rice, Reno, Pratt, and Barber Counties in south-central Kansas, and an area including Caddo, Grady, and Canadian Counties in central Oklahoma. Eastward from these areas the infestation decreased rapidly. The acreage devoted to corn in the above-mentioned seven-county area in Kansas was reduced from approximately 144,800 acres in 1940 to approximately 26,250 acres in 1945, a reduction of 82 percent. By 1947 the acreage in corn had been reduced still further, but figures on the actual reduction were not available at the time this report was prepared. This reduction was due largely to damage by the southwestern corn borer.

A map of Kansas showing its 105 counties. Each county is labeled with its name and a number. The numbers are: Cheyenne (), Rawlins (), Decatur (), Norton (T), Phillips (T), Smith (T), Jewell (O), Republic (O), Washington (), Mars Hall (), Nemaha (), Brown (), Sherman (), Thomas (), Sheridan (), Graham (T), Rooks (T), Osborne (O), Mitchell (O), Cloud (T), Clay (O), Riley (T), Pottawatomie (), Jackson (O), Atchison (), Wallace (), Logan (), Gove (), Trego (), Ellis (O), Russell (N), Lincoln (N), Ottawa (), Shawnee (), Jefferson (O), Leavenworth (), Wyan (), Greeley (), Wichita (), Scott (), Lane (), Ness (), Rush (), Barton (), Ellsworth (), Saline (6), Dickinson (I), Morris (O), Kearney (), Douglas (O), Osage (O), Franklin (), Miami (), Hamilton (), Kearny (), Finney (), Nodgeman (), Pawnee (), Stafford (), Rice (63), McPherson (11), Marion (T), Chase (T), Coffey (T), Anderson (), Linn (), Stanton (), Grant (), Haskell (), Gray (), Ford (), Edwards (78), Pratt (), Reno (61), Harvey (23), Butler (6), Greenwood (I), Woodson (O), Allen (), Bourbon (), Morton (), Stevens (), Seward (), Meade (), Clark (), Kiowa (N), Barber (69), Kingman (15), Sumner (21), Cowley (), Elk (O), Neosho (), Crawford (), Comanche (), Harper (N), Sherman (), Montgom. (O), Labette (O), Cherokee (), and Johnson ().

Map of Oklahoma showing county boundaries and average percent of stalks infested by the European corn borer in 1917. The map includes county names and infestation percentages.

Legend:

- Figures within counties indicate average percent of stalks infested.
- Trace (less than 1 percent of the stalks infested).
- No corn found.

Counties and Infestation Percentages:

County	Infestation Percent
CIMARRON	
TEXAS	
BEAVER	
HARPER	
WOODS	
ALFALFA	
GRANT	
KAY	25
OSAGE	
WASH.	
NOVATA	0
CRAIG	0
IOTAMA	
DEL.	
ELLIS	
MAJOR	
GARFIELD	
NOBLE	23
PAWNEE	
ROGERS	T
MAYES	0
WOODWARD	
DEWEY	
BLAINE	
KINGFISHER	
LOGAN	28
PAYNE	
LINCOLN	30
WAGONER	T
CHERO.	0
CUSTER	
CANADIAN	38
OKLAHOMA	30
OKFUSKE	2
MUSKOGEE	T
SEQUOYAH	0
BECKHAM	
WASHITA	
CADDO	
OKMUL.	T
MINTOSH	T
ADAIR	0
GREER	
KIOWA	55
CLAY	49
CLEVELAND	24
POTTAWATOMI	9
SEMINOLE	21
HUGHES	T
MUSKOGEE	0
HASKELL	0
LE FLORE	
HARMON	
JACKSON	
COMANCHE	
GARYIN	13
STEPHENS	
PONTOT.	16
COAL	T
PITTSBURG	T
LATIMER	0
PUSHMATAHA	
TILLMAN	
COTTON	
JEFFERSON	
CARTER	
MURRAY	
JOHNSTON	
MARSH.	T
BRYAN	T
CHOCTAW	T
MCURTAIN	

Figures within counties indicate average percent of stalks infested.
T - Trace (less than 1 percent of the stalks infested).
N - No corn found.
Counties not containing figures not surveyed.

Figure 1. Abundance of the southwestern corn borer in counties surveyed, fall of 1947.

